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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,310	12/03/2001	Bruce K. Daniels	16159.026001; P6937	2807

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EXAMINER

PRIETO, BEATRIZ

ART UNIT PAPER NUMBER

2142

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/006,310	DANIELS ET AL.	
	Examiner	Art Unit	
	Prieto B.	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9,11-18 and 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9,11-18 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/2001</u> . | 6) <input type="checkbox"/> Other: _____ |



DETAILED ACTION

1. This communication is in response to Amendment/RCE filed 12/08/05, claims 1-3, 5-7, 11-16 have been amended. Claims 4, 10 and 19 have been canceled. Claims 1-3, 5-9, 11-18 and 38 remain pending.

2. Claim interpretation: (i) claimed clause “state manager interposed between the client and a service component”, has been given the broadest reasonable interpretation in light of the specification. In this case, the state manager 28 processes some of the calls from the client component 2M and invokes services from the service component 34 for calls that need to be processed by the server component 4. The state manager 28 is **interposed** between the client component 2M and the object location service 20 *so that* the client component 2M **cannot** get a reference to the objects in the server component 4 *directly*. Instead, *all correspondences between the client component 2M and the service component 4 are routed through the state manager 28* [see 0029]. Thereby the claimed term interpose, means that the state manager intermediates or intervenes the communication between the client component 2M and the service component 34.

(ii) claimed clause “request the service component to obtain the plurality of data attributes on **the** list”, has been given the broadest reasonable interpretation in light of the specification. In this case, uncertainties are raised because according to the previous claimed clause “the state manager having a capability to generate a list of a plurality of data attributes ...and request the service component to obtain the plurality of data attributes **on the list**”, it is not clear, where the state manager generates a list of plurality, and yet will request the service component to obtain the plurality of data attributes **on the** list (it generated). In this case, as best understood, according to applicant’s specification: Before returning the proxy 14P and related objects to the client component 2M, the state manager 28 intercepts the proxy 14P and generates a list of its attributes and related objects to fetch into the proxy 14P (Step 120) and sends **the** request to the service component 34 (Step 124) The service component 34 fetches the list of **its attributes** and related objects as previously described and **returns** the data to the state manager 28, where the data is then cached in the proxy 14P (Step 126). ...If the client component 2 requests for an attribute that is not cached in the proxy 14P, the state manager 28 **fetches the attribute and adds the attribute to the collection** of attributes to pre-fetch for that particular state of the application. All of these operations, i.e. calling the remote location service for a remote reference to the server object, sending a request list of object attributes, and returning these fetched attributes, can be accomplished in a

single client/server roundtrip [see 0036]. The state manager 24 first collects data about the objects and attributes involved in the method call, i.e., the parameters passed in with the method call (Step 132). Then the state manager 28 calls on the service component 34 to synchronize all involved proxies with their corresponding server objects as previously described (Step 134)[see 0037]. The state manager 28 generates a list of attributes to fetch from the server component 4 and sends the shopping list to the service component 34. The service component 34 then uses the shopping list to **fetch data from the objects in the server component 4 and sends the data back to the state manager 28**, where they are stored in the appropriate proxies. By sending the list of attributes to the server component 34, all the attributes needed for a particular state of the application can be obtained in a single network call. [0031]. Thus [AS BEST UNDERSTOOD], the state manager having a capability to generate a list of a plurality of data attributes, ... and request the service component to obtain the plurality of data attributes **on a list residing on the server**.

(iii) claimed clause "state of an application", has been given the broadest reasonable interpretation in light of the specification. In this case, according to applicant's invention, the state manager 28 learns the states and transitions in the application, wherein a **state** may correspond to **information** displayed to an end-user, e.g., using the web browser 10 and a transition may correspond to one or more business method calls required to move the application from one state to another [see 0024].

Claim Rejections - 35 USC § 103

3. Quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action may be found in previous office action.

4. Claims 1-3, 5-9, 11-18 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over BANDA (US 6,226,690 (Banda)) in view of JACKSON (WO 00/058853).

Regarding to claimed invention of claims 1 and 11, Banda et al teaches a distribution system having a client and server as in figure 5B, comprising:

a proxy component interposed between the client and a second component communication, the proxy component requesting the second component data (Banda: col 7/line 32-57), the data comprising attribute data from a list of a plurality of data attributes stored in repository 380 (Banda: col 5/lines 64-col 6/line 24);

the proxy component further interposed between the client and the server for intermediating communication between the client and the server (col 7/lines 64 to col 8/line 7).

the second component fetching the plurality of data attributes from the server based on the list (Banda: proxy establishes communications with the second daemon component located on server host to obtain attributes from said repository, wherein the service component fetches information from the repository, col 7/line 32-57, the repository storing a listing of the various types of objects available by class or other types of attributes, as well as which server that target object may be associated with col 5/lines 64-col 6/line 24); however Banda does not explicitly teach where the attributes represent state of an application, e.g. information displayed to an end-user.

Jackson teaches a client requesting multiple objects and certain attributes of interest to a server, the server returning only those attributes requested (p. 3, lines 7-14), the client generating a list of a plurality of attributed by storing the received attributes in a cache memory at the client (p. 4, lines 2-9 and p. 7, lines 20-22). The request from the client specifies the objects desired and the attributes associated with those object that are requested because of the immediate interest to the client application for display to an user (i.e. state information of the application) (p. 7, lines 10-13), wherein those attributes requested may be set by the application software as those needed (p. 8, line 25-p. 9, line 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching because in doing so the generation of a locally cached list of a plurality of data attributes required to represent a state of an application in the distributed application would not require a connection over a network with a host when these are available in the cache, and the list of attributed among client and server may be transparently synchronized, minimizing communication over the network, as taught by Jackson.

Regarding claims 2 and 12, a transport mechanism interposed between the state manager and the service component (i.e., SOMDClient Proxy, which allows general-purpose dispatch mechanism (Banda: col 7/lines 16-31).

Regarding claims 3-7, and 13-16 wherein the state manager comprises means for learning data attributes (i.e., step 510, figure 6), means for creating a proxy for data in the server (i.e., step 380, fig 5A), means for tracking changes made to attributes cached in the proxy (i.e., step 520, fig. 6), and means for generating a list of attributes changed in the proxy (i.e., step 520, fig. 6).

Regarding claim 11, comprises limitation(s) substantially the as those on or discussed on the method claim 1, same rationale of rejection is applicable.

Regarding claims 8, 9, 10, 17, 18 and 19, wherein the state manager further comprises means for generating an executable instruction to be executed on the server (Banda: col. 8, lines 40-55).

5. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banda in view of Jackson, as applied to claim 1, in further in view of Drewry (US 5,925,100).

Regarding claim 38, the combination of Banda and Jackson determines the attributes required to represent the server data and also means for fetching the data, but does not include the prefetching data.

Drewry describes predicting and prefetching objects to the local representation based on "primitives", see figures 5 and 6.

It would have been obvious to combine the prefetching objects as taught in Drewry into the combination of Banda and Jackson for simplifying task (Drewry: col 11/lines 21-col 12/line 35).

Response to Arguments

6. Regarding claims 1 and 11, it is argued (p. 6 of remarks) that the applied reference Banda fails to teach all four components, namely, the state manager and the service component as recited in amended claim 1. Because, according to applicant, Banda does not teach a service component interposed between the state manager and the server.

In response to the above-mentioned argument, applicant's interpretation of the applied prior art has been fully considered. However, the broadest reasonable interpretation has been applied to the claimed term "interposed". Claimed clause (i) "state manager interposed between the client and a service component", has been given the broadest reasonable interpretation in light of the specification.

In this case, the state manager 28 processes some of the calls from the client component 2M and invokes services from the service component 34 for calls that need to be processed by the server component 4. The state manager 28 is **interposed** between the client component 2M and the object location service 20 *so that* the client component 2M **cannot** get a reference to the objects in the server component 4 *directly*. Instead, *all correspondences between the client component 2M and the service component 4 are routed through the state manager 28* [see 0029]. Thereby the claimed term interpose,

means that the state manager intermediates or intervenes in the communication between the client component 2M and the service component 34.

Banda teaches a component interposed between the client process and the server process communication. Specifically, where the client process (300 of Fig. 5B) communicates with the server process (305 of Fig. 5B) via components SOMDServer (proxy) and DSOM daemon (450) of Fig. 5B, wherein a client process invoking a call to initiate communications with the server process containing the target object **via** the SOMDServer proxy (col 7/lines 32-35). Thus, Banda teaches a proxy component interposed between the client process and a second component residing on the server.

Banda further teaches a component interposed between the client process and a second component. Specifically, wherein the client process communicates with SOMDServer proxy generates a desired second component object (Calc object) within the server process and creates a corresponding Calc proxy object in the client process, where now the client process has readily accessible communication to an active server process with a corresponding Calc object **via** the Calc proxy object (col 7/lines 64 to col 8/line 7). Banda teaches all four component, namely, client process, a server process, a state manager and the service component as recited in amended claim 1. Banda teaches a service component interposed between the state manager and a second component.

7. Regarding claims 1 and 11, it is argued (p. 6 of remarks) that the applied reference Banda fails to teach all four component, namely, the state manager and the service component as recited in amended claim 1. Because, according to applicant, Banda does not teach a state manager making a request for a list of data attributes to a service component interposed between the state manager and the server.

In response to the above-mentioned argument, applicant's interpretation of the applied prior art has been fully considered. Banda teaches where the (SOMDServer) proxy establishes communications with the daemon located on that host to obtain a binding to that server process. The daemon immediately returns the binding to the SOMDServer proxy object if the server process is already activated, if it's not activated, then the daemon communicates with the implementation repository (380) to obtain the means by which to activate the server process, the daemon which then tells the proxy SOMDServer proxy what the binding is for the server process (col 7/line 32-57), where the repository 380 is a listing of the various types of objects available by class or other types of attributes, as well as which server that target object may be associated with (col 5/lines 64-col 6/line 24).

Additionally, Jackson teaches a client process requesting multiple objects and certain attributes of interest, the server process returning only those requested (p. 3, lines 7-14), the client generating a list of a plurality of attributed by storing the received attributes in a cache memory at the client (p. 4, lines 2-9 and

p. 7, lines 20-22). The request from the client specifies the objects desired and the attributes associated with those object that are requested because of the immediate interest to the client application (p. 7, lines 10-13), those attributes requested may be set by the application software as those needed (p. 8, line 25-p. 9, line 8).

Banda, at least teaches a component “state manager” making a request for a list of data attributes to a “service” another component interposed between the state manager and the server process.

8. All arguments presented on the above-mentioned amendment have been considered and addressed in substance, how these have been found not persuasive.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (571) 272-3902. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Andrew T. Caldwell can be reached at (571) 272-3868. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system, status information for published application may be obtained from either Private or Public PAIR, for unpublished application Private PAIR only (see <http://pair-direct.uspto.gov> or the Electronic Business Center at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
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B. Prieto
Primary Examiner
TC 2100
January 31, 2006


BEATRIZ PRIETO
PRIMARY EXAMINER

1/31/06